

ORACLE WEBLOGIC SERVER CONTINUOUS AVAILABILITY

KEY FEATURES AND BENEFITS

ORACLE WEBLOGIC SERVER CONTINUOUS AVAILABILITY INTEGRATED SOLUTION FOR MAXIMUM AVAILABILITY ARCHITECTURES

KEY FEATURES

- WebLogic Automatic Cross Domain Transaction Recovery
- WebLogic Server Zero Downtime Patching
- Live Partition Migration
- WebLogic Coherence Grid Edition Option
- Oracle Traffic Director
- Oracle Site Guard
- Prerequisite: Oracle WebLogic Server Enterprise Edition or Oracle WebLogic Suite

BENEFITS

- Integrated Solution for Data Center Recovery
- Faster Failover/Switchover
- Increases overall Application Availability
- Reduce Human Error and Risk
- Data Integrity
- Recovery of work
- Local Access to real-time data

Oracle WebLogic Server is the #1 Java application server. It offers development tools and APIs for application innovation with a mission critical runtime. Multitenancy supports application consolidation, while preserving isolation and enabling portability. Continuous availability features enable zero downtime in multi data center configurations. Oracle WebLogic Server is strategically integrated with Oracle's full product and cloud service portfolio, and is available in multiple editions.

Oracle WebLogic Server Continuous Availability is an integrated solution for building maximum availability architectures that span data centers across dispersed geographical locations. Oracle WebLogic Server Continuous Availability is an add on to Oracle WebLogic Server Enterprise Edition or Oracle WebLogic Suite. Together with the high availability features in these products, Oracle WebLogic Server Continuous Availability provides the maximum availability, reliability and application stability during planned upgrades or unexpected failures.

Oracle WebLogic Server Continuous Availability includes cross-domain transaction recovery, allowing maximum recovery of transactions across data centers. Zero Down Time Patching enables simplified rolling patch application. Live Partition Migration migrates multitenant partitions across domains for maximum application availability. Oracle Coherence Federated Caching replicates cache data asynchronously across geographically dispersed Coherence clusters. Oracle Traffic Director provides a fast, reliable, and scalable software load balancer. Oracle Site Guard is disaster-recovery solution that enable automation of complete site switchover or failover.

Oracle WebLogic Server Continuous Availability

Oracle WebLogic Server Continuous Availability is a high value solution for multi data center high availability. In addition to the capabilities of Oracle WebLogic Server Enterprise Edition or Oracle WebLogic Suite, it adds unique availability, scalability and manageability capabilities to meet the needs of modern enterprises. Oracle WebLogic Server Continuous Availability enables enterprises to maintain business continuity during planned upgrades, unforeseen disasters, and natural calamities that would otherwise cause reduced productivity, service quality, and lost revenue.

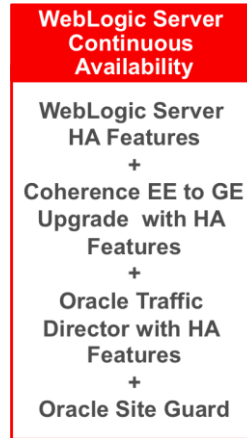


Figure 1: Oracle WebLogic Server Continuous Availability

Oracle WebLogic Server Continuous Availability is the most complete solution for Multi Data Center Architectures, complementing and enhancing the high availability features already in Oracle WebLogic Server, Oracle Coherence, and Oracle Enterprise Manager.

- **Automatic Recovery of Transactions – Automated Cross Domain Transaction Recovery**

Oracle WebLogic Server Continuous Availability includes Automated Cross Domain Transaction Recovery, which provides automated recovery of XA transactions of an entire domain, or entire site, by server(s) running in a different domain or different site. Automated Cross Domain Transaction Recovery enables transaction recovery in active/active application infrastructure architectures.

Automated Cross Domain Transaction Recovery requires that a database transaction log (TLOG) has been configured, and assumes that the TLOG has been replicated using database replication technologies such as Oracle Data Guard, for high availability. It can be used with any XA database supported by Oracle WebLogic Server. It can also take advantage of the Active GridLink for RAC, and its ability to do Fast Connection Failover for continuous connectivity.

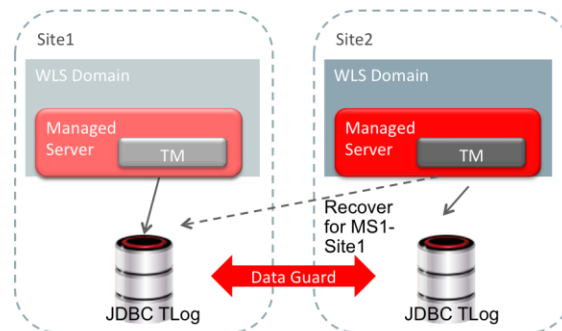


Figure 2: XA transaction recovery across domains after failure of a server, cluster, domain or entire site.

- **Avoid Down Time and Risk while Patching – Zero Down Time Patching**

Zero Down Time Patching provides an automated mechanism to orchestrate the rollout of patches while avoiding downtime or loss of sessions. Zero Down Time Patching reduces downtime for mission-critical applications that require availability and predictability while applying patches.

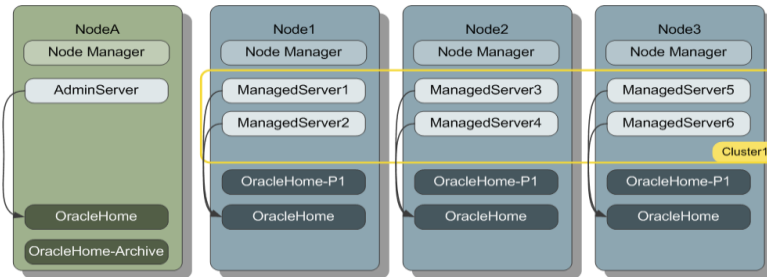


Figure 3: Zero Downtime Patching orchestrates the rollout of patches with no disruptions to running mission critical applications.

▪ **Live Partition Migration**

Oracle WebLogic Server Continuous Availability includes Live Partition Migration for Oracle WebLogic Server Multitenant customers. Live Partition Migration provides the ability to move running partitions and resource groups from one cluster to another without impacting application users, and eliminating application downtime for planned events.

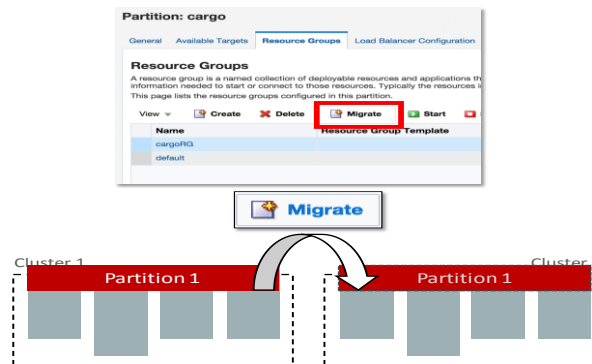


Figure 4: WebLogic Multitenant Partition Portability

▪ **Distribute Data Grid Updates Across Data Centers – Oracle Coherence Federated Caching**

Oracle Coherence Federated Caching provides replication of cached data across clusters to provide redundancy, off-site backup, and multiple points of access for application users in different geographical locations. Federated caching supports multiple replication topologies such as active-active, active-passive, hub-spoke.

Federated Caching provides applications with the ability to accept, reject, or modify cache entries being stored locally or remotely. Conflict resolution is application specific to allow the greatest amount of flexibility when defining replication rules. Federated caching is configured using Coherence configuration files and requires no changes to application code.

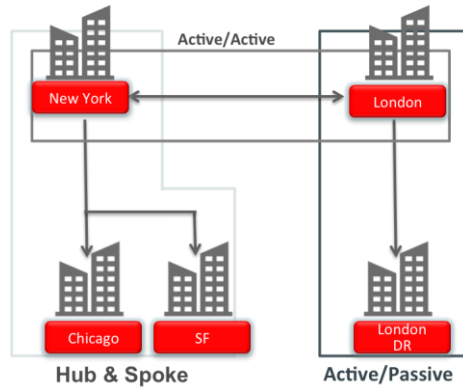


Figure 5: Oracle Coherence Federated Caching – provides local access to data in MAA architectures

- **High Availability Traffic Routing – Oracle Traffic Director**

Oracle Traffic Director is a fast, reliable, and scalable software load balancer that customers can deploy as the reliable entry point for HTTP(s) and T3(s) traffic to application servers and web servers in the network. Oracle Traffic Director can distribute requests based on the specified load-balancing method, routing the requests based on specified rules, caching frequently accessed data, prioritizing traffic, and controlling the quality of service.

Along with features like high performance, flexible routing, load control, and quality of service, Oracle Traffic Director provides many required high-availability features, such as health checks for the back end, failover for load balancing, and dynamic reconfiguration. Oracle Traffic Director is also integrated with the Zero Downtime Patching and Live Partition Migration features of Oracle WebLogic Server Continuous Availability.

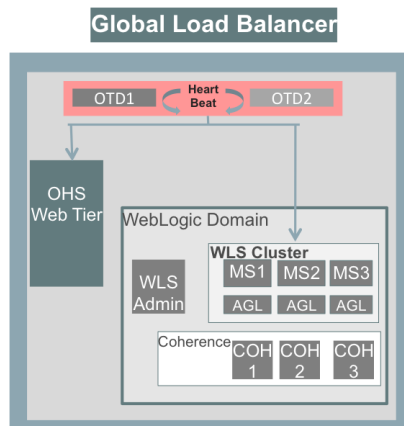


Figure 6: Oracle Traffic Director – Fast, Reliable, Scalable Load Balancing

- **Automate and Orchestrate Multi Data Center Failover or Switchover – Oracle Site Guard**

Oracle Site Guard provides flexible and seamless orchestration of switchovers and failovers between disaster recovery sites, thereby minimizing downtime for enterprise deployments. The disaster recovery automation features in Oracle Site Guard eliminate the need for human intervention and prevent human induced errors in the switchover or failover process. During a switchover or failover, Oracle Site Guard can control site components such as application servers, Web Servers, applications, disk storage and other site components through the use of scripts. Oracle Site Guard minimizes recovery time, reduces human errors by automating the process, increases confidence by planning and testing procedures, and reduces skill levels required during switchover or failover.

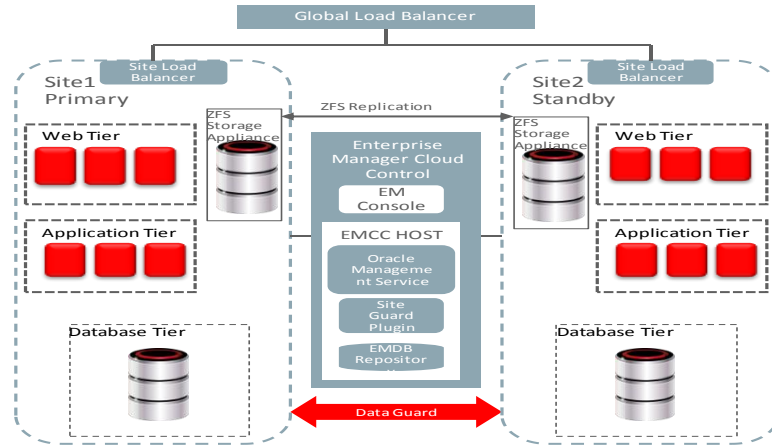


Figure 7: Oracle Site Guard – Automate and Orchestrate Multi Data Center Failover or Switchover

- Disaster Recovery for the Oracle Database - Data Guard, Data Guard Broker and Clusterware**

Oracle Data Guard, Oracle Data Guard Broker and Oracle Clusterware are complementary products available separately from Oracle WebLogic Server Continuous Availability. They all contribute to manage and orchestrate failover and switchover of the Oracle Database. Oracle Data Guard maintains the standby databases as copies of the primary database. Data Guard Broker creates, manages, and monitors a Data Guard configuration, and can send notifications to Active GridLink for RAC, which then makes new connections to the database in the failover site, and coordinates with Oracle Clusterware to failover role-based services. Oracle Site Guard uses Data Guard Broker to perform failover/switchover of the Databases. The integration of all these products makes the failover of the database fast and automatic.

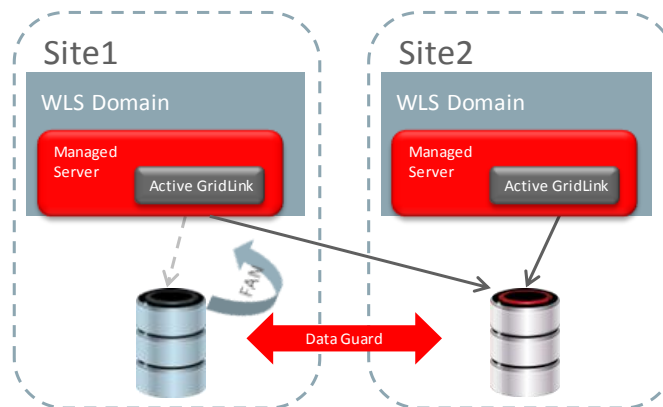


Figure 8: Oracle Data Guard, Data Guard Broker, and Clusterware –Database failover and switchover

Summary

Oracle WebLogic Server Continuous Availability provides applications with maximum availability in architectures that span data centers across distributed geographical locations. During planned upgrades, unforeseen disasters, natural calamities, and downtime the main benefits of this integrated solution are, faster failover or switchover, increased overall application availability, reduce human error and risk, data integrity, recovery of work and local access of real-time data. Build your Maximum Availability architectures with Oracle WebLogic Server Continuous Availability!

RELATED PRODUCTS

Oracle WebLogic Server Continuous Availability is an integrated set of capabilities to meet the maximum availability, reliability and application stability of businesses during planned upgrades or unexpected failures.

RELATED PRODUCTS

Prerequisites:

- Oracle WebLogic Server Enterprise Edition, or
- Oracle WebLogic Suite

Extend Oracle WebLogic Server Continuous Availability with:

- Oracle Integration Continuous Availability

Supported Platforms

For supported platforms and configuration detail, refer to the following: oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html
See table 1 for a platform summary for Oracle WebLogic Server.

Supported Platforms	
Software	
Operating systems	<ul style="list-style-type: none"> • AIX • HP-UX • Linux (including Docker containers) • Mac OS X (development) • Solaris • Windows
Databases	<ul style="list-style-type: none"> • Oracle (and Oracle Real Application Clusters) • IBM DB2 • Microsoft SQL Server • MySQL • Sybase
Web Servers	<ul style="list-style-type: none"> • Apache • Microsoft IIS • Oracle HTTP Server • Oracle iPlanet Web Server
Java	<ul style="list-style-type: none"> • Java EE 7 and Java SE 8 (Oracle WebLogic Server 12cR2) • See product documentation for details on other Oracle WebLogic Server versions

Table 1: Oracle WebLogic Server Platform Support Summary

Contact Us

For more information about Oracle WebLogic Server, please visit oracle.com or call +1.800.ORACLE1 to speak to an Oracle representative.



Copyright © 2015, Oracle and/or its affiliates. All rights reserved.

This document is provided for information purposes only and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.